AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A method for detecting a polymerase chain reaction (PCR) product, comprising:

~~(a)~~ providing at least a pair of electrodes in a PCR solution-containing vessel;

~~(b)~~ performing PCR;

~~(c)~~ producing an electric field between the electrodes; and

~~(d)~~ measuring a change in a dielectric property in the PCR solution,

wherein the PCR is performed in the absence of an ionically-labelled probe.

2. (Currently Amended) The method according to claim 1, wherein ~~in step (b),~~ the PCR is performed in the absence of an ionically-labelled primer.

3. (Original) The method according to claim 1, wherein the PCR solution-containing vessel is a PCR tube or a polymerization microchamber.

4. (Original) The method according to claim 1, wherein the dielectric property is an impedance, a dielectric loss, a dielectric constant, or an admittance.

5. (Currently Amended) The method according to claim 1, wherein ~~in step (c),~~ the electric field is produced using an alternating current at a frequency of 1 Hz to 100 MHz.

6. (Currently Amended) The method according to claim 1, wherein ~~in step (c),~~ the electric field is produced using an average AC voltage of 1 mV to 10 V.

7. (New) The method according to claim 1, wherein the PCR solution-containing vessel includes a PCR tube, and the electrodes are installed to be opposite to each other at a predetermined height from a bottom of the PCR tube.

8. (New) The method according to claim 1, wherein the PCR solution-containing vessel includes a polymerization microchamber, and the electrodes are installed at upper and lower sides of the microchamber, respectively.

9. (New) The method according to claim 1, further comprising:

connecting an impedance sensor to the electrodes to measure a change in an impedance magnitude with increase of the number of PCR cycles.

10. (New) The method according to claim 1, further comprising:

connecting an impedance sensor to the electrodes to measure a change in an impedance magnitude with increase of the number of PCR cycles at a predetermined frequency.

11. (New) The method according to claim 10, wherein the predetermined frequency is about 1,000Hz.